CLAIMS

What is claimed is:

1. A vehicle including an interactive display system for a vehicle, comprising

projecting means for projecting text and/or graphics into a field of view of a forward-facing occupant of the vehicle, and

interacting means coupled to said projecting means for enabling the occupant to interact with said projecting means to change the text and/or graphics projected by said projecting means or direct another vehicular system to perform an operation.

2. The vehicle of claim 1, wherein said projecting means comprise a heads-up display.

3. The vehicle of claim 1, wherein said projecting means are arranged in connection with an instrument panel of the vehicle.

4. The vehicle of claim 1, wherein said projecting means are arranged to project the text and/or graphics against a windshield of the vehicle.

5. The vehicle of claim 1, wherein said projecting means comprise two heads up displays, one arranged to project text and/or graphics into a field of view of a driver and the other arranged to project text and/or graphics into a field of view of the passenger.

6. The vehicle of claim 1, wherein said interacting means comprise a microphone.

7. The vehicle of claim 1, wherein said interacting means comprise a touch pad.

8. The vehicle of claim 7, wherein said touch pad is arranged on a steering wheel of the vehicle.

9. The vehicle of claim 8, wherein said touch pad is arranged over a cover of an airbag module in the steering wheel.

10. The vehicle of claim 9, wherein said touch pad is constructed to break upon deployment of an airbag from the airbag module.

11. The vehicle of claim 7, further comprising

correlation means for correlating a location on said touch pad which has been touched by the occupant to the projected text and/or graphics and causing said projecting means to change the projected text and/or graphics based on the location on said touch pad which has been touched by the occupant.

12. The vehicle of claim 7, further comprising

correlation means for correlating a location on said touch pad which has been touched by the occupant to the projected text and/or graphics and causing the vehicular system to perform the operation based on the location on said touch pad which has been touched by the occupant.

13. The vehicle of claim 7, wherein said touch pad is separable from the vehicle.

14. The vehicle of claim 7, wherein said touch pad and said projecting means include means for enabling wireless communication between said touch pad and said projecting means.

15. The vehicle of claim 1, wherein said interacting means are arranged in an armrest of the vehicle.

16. The vehicle of claim 1, wherein said interacting means are arranged in connection with an instrument panel of the vehicle and are movable between a storage position in which said interacting means are inaccessible to the occupant and a use position in which said interacting means are accessible to the occupant.

17. The vehicle of claim 1, wherein said interacting means are arranged to enable the occupant to interact with said projecting means to change the text and/or graphics projected by said projecting means.

18. The vehicle of claim 1, wherein said interacting means are arranged to enable the occupant to interact with said projecting means to direct another vehicular system to perform an operation.

19. The vehicle of claim 18, wherein the another vehicular system is a communication system, navigation system or entertainment system.

20. The vehicle of claim 18, wherein the another vehicular system is a microprocessor capable of providing e-mail functions and Internet access.

21. The vehicle of claim 18, wherein the another vehicular system is a heating and air-conditioning system.

22. The vehicle of claim 1, wherein said projecting means comprise a holographic combiner arranged in connection with a windshield of the vehicle.

23. The vehicle of claim 1, further comprising

determining means for determining a desired location of the eyes of the occupant, and

adjustment means coupled to a seat of the vehicle on which the occupant is situated for adjusting the seat based on the determined desired location of the eyes of the occupant to thereby move the occupant and thus the occupant's eyes and enable the occupant's view of the projected text and/or graphics to be improved.

24. The vehicle of claim 23, wherein determining means comprise at least one receiver for receiving waves from a space above a seat in the vehicle in which the occupant is likely to be situated.

25. The vehicle of claim 24, wherein said determining means further comprise pattern recognition means for determining the position of the occupant based on the waves received by said at least one receiver and enable the desired position of the eyes of the occupant to be determined from the position of the occupant.

26. The vehicle of claim 23, wherein said determining means comprise at least one transmitter for transmitting waves into the space above a seat in the vehicle and at least one receiver for receiving the transmitted waves after the waves have passed at least partially through the space above the seat.

27. The vehicle of claim 1, further comprising

determining means for determining a desired location of the eyes of the occupant, and

adjustment means coupled to said projecting means for adjusting said projecting means based on the determined desired location of the eyes of the occupant and thus the location of the projected text

and/or graphics and thereby enable the occupant's view of the projected text and/or graphics to be improved.

28. The vehicle of claim 27, wherein determining means comprise at least one receiver for receiving waves from a space above a seat in the vehicle in which the occupant is likely to be situated.

29. The vehicle of claim 28, wherein said determining means further comprise pattern recognition means for determining the position of the occupant based on the waves received by said at least one receiver and enable the desired position of the eyes of the occupant to be determined from the position of the occupant.

30. The vehicle of claim 27, wherein said determining means comprise at least one transmitter for transmitting waves into the space above a seat in the vehicle and at least one receiver for receiving the transmitted waves after the waves have passed at least partially through the space above the seat.

31. The vehicle of claim 1, wherein said interacting means comprise a microphone.

32. The vehicle of claim 31, further comprising

determining means for determining a probable location of the mouth of the occupant, and

adjustment means for adjusting the sensitive direction of said microphone to aim said microphone toward the probable location of the mouth of the occupant.

33. The vehicle of claim 31, wherein said microphone is arranged on or in proximity to a rear view mirror assembly of the vehicle.

34. The vehicle of claim 31, further comprising

determining means for determining a probable location of the mouth of the occupant, and

adjustment means for adjusting a seat on which the occupant is situated to decrease the difference between the sensitive direction of said microphone and the probable location of the mouth of the occupant.

35. A vehicle including a display system for a vehicle, comprising

projecting means for projecting text and/or graphics into a field of view of a forward-facing occupant of the vehicle,

determining means for determining a desired location of the eyes of the occupant for optimum viewing of the projected text and/or graphics, and

adjustment means coupled to a seat of the vehicle on which the occupant is situated for adjusting the seat based on the determined desired location of the eyes of the occupant to thereby move the occupant and thus the occupant's eyes and enable the occupant's view of the projected text and/or graphics to be improved.

36. The vehicle of claim 35, further comprising

interacting means coupled to said projecting means for enabling the occupant to interact with said projecting means to change the text and/or graphics projected by said projecting means or direct another vehicular system to perform an operation.

37. The vehicle of claim 36, wherein said interacting means comprise a touch pad.

38. The vehicle of claim 37, wherein said touch pad is arranged on a steering wheel of the vehicle.

39. The vehicle of claim 38, wherein said touch pad is arranged over a cover of an airbag module in the steering wheel and is constructed to break upon deployment of an airbag from the airbag module.

40. The vehicle of claim 37, further comprising

correlation means for correlating a location on said touch pad which has been touched by the occupant to the projected text and/or graphics and causing said projecting means to change the projected text and/or graphics based on the location on said touch pad which has been touched by the occupant.

41. The vehicle of claim 37, further comprising

correlation means for correlating a location on said touch pad which has been touched by the occupant to the projected text and/or graphics and causing the vehicular system to perform the operation based on the location on said touch pad which has been touched by the occupant.

42. The vehicle of claim 37, wherein said touch pad is separable from the vehicle.

43. The vehicle of claim 37, wherein said touch pad and said projecting means include means for enabling wireless communication between said touch pad and said projecting means.

44. The vehicle of claim 36, wherein said interacting means are arranged in an armrest of the vehicle.

45. The vehicle of claim 36, wherein said interacting means are arranged in connection with an instrument panel of the vehicle and are movable between a storage position in which said interacting means are inaccessible to the occupant and a use position in which said interacting means are accessible to the occupant.

46. The vehicle of claim 36, wherein said interacting means are arranged to enable the occupant to interact with said projecting means to change the text and/or graphics projected by said projecting means.

47. The vehicle of claim 36, wherein said interacting means are arranged to enable the occupant to interact with said projecting means to direct another vehicular system to perform an operation.

48. The vehicle of claim 36, wherein determining means comprise at least one receiver for receiving waves from a space above a seat in the vehicle in which the occupant is likely to be situated.

49. The vehicle of claim 48, wherein said determining means further comprise pattern recognition means for determining the position of the occupant based on the waves received by said at least one receiver and enable the desired position of the eyes of the occupant to be determined from the position of the occupant.

50. The vehicle of claim 36, wherein said determining means comprise at least one transmitter for transmitting waves into the space above a seat in the vehicle and at least one receiver for receiving the transmitted waves after the waves have passed at least partially through the space above the seat.

51. A vehicle including a display system for a vehicle, comprising

projecting means for projecting text and/or graphics into a field of view of a forward-facing occupant of the vehicle,

determining means for determining a desired location of the eyes of the occupant for optimum viewing of the projected text and/or graphics, and

adjustment means coupled to said projecting means for adjusting said projecting means based on the determined desired location of the eyes of the occupant and thus the location of the projected text and/or graphics and thereby enable the occupant's view of the projected text and/or graphics to be improved.

52. The vehicle of claim 51, further comprising

interacting means coupled to said projecting means for enabling the occupant to interact with said projecting means to change the text and/or graphics projected by said projecting means or direct another vehicular system to perform an operation.

53. The vehicle of claim 52, wherein said interacting means comprise a touch pad.

54. The vehicle of claim 53, wherein said touch pad is arranged on a steering wheel of the vehicle.

55. The vehicle of claim 53, wherein said touch pad is arranged over a cover of an airbag module in the steering wheel and is constructed to break upon deployment of an airbag from the airbag module.

56. The vehicle of claim 53, further comprising

correlation means for correlating a location on said touch pad which has been touched by the occupant to the projected text and/or graphics and causing said projecting means to change the projected text and/or graphics based on the location on said touch pad which has been touched by the occupant.

57. The vehicle of claim 53, further comprising

correlation means for correlating a location on said touch pad which has been touched by the occupant to the projected text and/or graphics and causing the vehicular system to perform the operation based on the location on said touch pad which has been touched by the occupant.

58. The vehicle of claim 53, wherein said touch pad is separable from the vehicle.

59. The vehicle of claim 53, wherein said touch pad and said projecting means include means for enabling wireless communication between said touch pad and said projecting means.

60. The vehicle of claim 52, wherein said interacting means are arranged in an armrest of the vehicle.

61. The vehicle of claim 52, wherein said interacting means are arranged in connection with an instrument panel of the vehicle and are movable between a storage position in which said interacting means are inaccessible to the occupant and a use position in which said interacting means are accessible to the occupant.

62. The vehicle of claim 52, wherein said interacting means are arranged to enable the occupant to interact with said projecting means to change the text and/or graphics projected by said projecting means.

63. The vehicle of claim 52, wherein said interacting means are arranged to enable the occupant to interact with said projecting means to direct another vehicular system to perform an operation.

64. The vehicle of claim 52, wherein determining means comprise at least one receiver for receiving waves from a space above a seat in the vehicle in which the occupant is likely to be situated.

65. The vehicle of claim 64, wherein said determining means further comprise pattern recognition means for determining the position of the occupant based on the waves received by said at least one receiver and enable the desired position of the eyes of the occupant to be determined from the position of the occupant.

66. The vehicle of claim 52, wherein said determining means comprise at least one transmitter for transmitting waves into the space above a seat in the vehicle and at least one receiver for receiving the transmitted waves after the waves have passed at least partially through the space above the seat.

67. A vehicle including an interactive display system for a vehicle, comprising

projecting means for projecting text and/or graphics into a field of view of a forward-facing occupant of the vehicle,

a microphone coupled to said projecting means for enabling the occupant to interact with said projecting means to change the text and/or graphics projected by said projecting means or direct another vehicular system to perform an operation,

determining means for determining a probable location of the mouth of the occupant, and

adjustment means for adjusting the sensitive direction of said microphone to aim said microphone toward the probable location of the mouth of the occupant.

68. The vehicle of claim 67, wherein said microphone is arranged on or in proximity to a rear view mirror assembly of the vehicle.

69. A vehicle including an interactive display system for a vehicle, comprising

projecting means for projecting text and/or graphics into a field of view of a forward-facing occupant of the vehicle,

a microphone coupled to said projecting means for enabling the occupant to interact with said projecting means to change the text and/or graphics projected by said projecting means or direct another vehicular system to perform an operation,

determining means for determining a probable location of the mouth of the occupant, and

adjustment means for adjusting a seat on which the occupant is situated to decrease the difference between the sensitive direction of said microphone and the probable location of the mouth of the occupant.

70. The vehicle of claim 69, wherein said microphone is arranged on or in proximity to a rear view mirror assembly of the vehicle.

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